

Evaluation of Fuel Consumption and Energy Efficiency with a Railway Test Vehicle Powered by Fuel Cells

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We (Railway Technical Research Institute) have been developing a railway vehicle powered by fuel cells in order to preserve global environment. We introduced the 100kW class fuel cells, installed them in the test vehicle, and carried out the running test with the test vehicle on our test track. From these test results, we tried to evaluate fuel consumption and energy efficiency of the test vehicle, and found a large variation in the results of fuel consumption depending on running condition. Then, we tried to calculate fuel consumption under the condition of practical revenue line. This paper reports on the running test results and the calculation of fuel consumption and energy efficiency of a railway vehicle powered by fuel cells.